574-3A-AGWH

Site Walk Through Notes
Williamsburg Receiving and Storage and Cherry Blossom LLC Site
10190 Munro Road
Williamsburg, Michigan

A site walk through was performed at the Williamsburg Receiving and Storage (WRS) and Cherry Blossom LLC Site at 10190 Munro Road in Williamsburg, Michigan by Ted LaMarre of Weston Solutions, Inc. and Steve Niehaus of GRT, Inc. at the request of the U.S. EPA Region V.

Mr. LaMarre and Mr. Niehaus met with Mr. Chris Hubbel, owner of WRS and Cherry Blossom LLC; Ms. Julie Harrision, attorney representing Mr. Hubbel; and Mr. Brian Smith, plant chemist for WRC and Cherry Blossom LLC.

The following activities took place and observations were made during the site walk through:

1) Two companies operate at the facility. WRC performs the cherry processing activities (preserving, sorting and pitting the cherries) and Cherry Blossom LLC performs the cherry finishing (adding flavor and coloring to the cherries) and packaging activities. These activities are provided in more detail below.

2) WRC purchases approximately 33% of the Michigan's sweet cherry crop for processing. WRC processes approximately 14 million pounds of cherries annually. Following is a sequence of activities that are performed at the site:

a) Bulk cherries arrive from farm fields in containers with water. The cherries are transported in water to the facility to avoid bruising of the cherries. The cherries are harvested with the stems removed. This is performed by the farmers by spraying Ethrol on the cherry trees. The Ethrol loosens the cherries from the stems. If Ethrol was not used the tree would need to be shaken to hard to harvest the cherries and the tree would be damaged. Hand picking is not performed in Michigan due to labor costs.

b) The cherries are pumped into the earthen vats. The vats are 24 feet wide by 44 feet long, and are approximately 8 to 8.5 feet deep. The vats are lined with two 40-mil PVC liner, a geofabric membrane, and a 6 mil plastic membrane. Approximately 5,000 gallon of brine solution is then added to each vat. The brine solution consists of water, sodium bisulfite, citric acid, and calcium chloride and is termed "high strength brine". The sodium bisulfite and citric acid is used to preserve the cherries. The calcium chloride is used to make the cherries firm. The brining process removes up to 95% of the sugar from the cherries. If the sugar were not removed the cherries would not be able to be preserved. The cherries are stored in the vats for a minimum of 90 days and can stay in the vats indefinitely. The SO_2 and pH content of the brine in the vats is measured

regularly. If the SO_2 levels indicate the sodium bisulfite concentrations are being depleted, additional sodium bisulfite is added. The pH of the brine solution is measured to insure the solution remains neutral.

c) The cherries are then pumped into temporary storage containers and taken to the processing plant where they are sorted for size and quality. From the temporary storage containers the cherries are pumped into an approximately 10,000 gallon stainless steel container. The cherries are then pumped from the stainless steel container and transported via a conveyor belt. The high strength brine solution is separated from the cherries and is temporarily stored in an approximate 30,000 gallon size tank inside the processing plant. Approximately 10,000 gallon of the high strength brine is generated per week. A portion of the this retained high strength brine is used to transport cherries that have been processed but not finished (ie: added color and sugar) to WRS's customers who do not compete in the same markets as WRS. A majority of the temporary stored high strength brine is disposed. The high strength brine was formerly disposed in the onsite lagoon. The high strength brine is now placed in three approximately 75,000 gallon tanks in the maintenance building and disposed offsite.

d) The cherries then pass through equipment that separates the cherries that still contain stems from the stemless cherries. The stemmed cherries are separated because they have a higher value since they can be used for decorative purposes (ie: in cocktails). Up to 95% of the cherries are stemless.

e) The cherries then pass through equipment that separates the cherries by size and are placed in a temporary storage container.

f) The cherries then passed through equipment that removes the cherry pits. The cherry pits are transported via water in a closed circuit loop to a storage container. WRS occasionally adds bleach to the water to control odors. The pits are then stored onsite in the maintenance building. A small percentage of the pits are used as pellet stone for burning in wood stoves (taken to location in Kingsley, Michigan). A majority of the pits are transported back to the farms where they are used as mulch around the cherry trees.

g) Steps "a" through "f" above are performed by WRS. The cherries are then "finished" by Cherry Blossom LLC by adding color and flavor per the customer's specifications. Over 90% of the cherries that Cherry Blossom LCC process are for the dairy industry for use in ice cream. The pitted cherries from step "f" are then washed to rinse off any remaining brine solution. This rinse solution is referred to as "low strength brine solution" Approximately 10,000 gallons of the low strength brine solution is generated per week and was formerly disposed of in the onsite lagoon. The low strength brine solution is now temporary stored into

three approximately 75,000 gallon tanks located in the maintenance building and transported offsite for disposal.

h) The cherries are then placed in stainless steel containers containing a mixture of 50% corn syrup and 50% high fructose syrup. Bensoate, K-sorbate, and citric acid is also added to the syrup solution to act as preservatives. Through osmosis, the sugar in the syrup solution is transferred into the cherries. The cherries stay in the solution for 4 to 7 days depending on the desired sweetness. Up to 98% of syrup mixture is reused. The syrup mixture is passed through a condenser where the water is boiled off. The remaining 2% of the syrup mixture that cannot be condensed is hauled offsite for ethanol processing to a company in Ohio. The water that is produced from the condensation activities is discharged to a floor drain which then drains to a sump in the western portion of the treatment building. This water was then formerly discharged to the onsite lagoon. Presently the water is temporary stored on the onsite 75,000 gallon tanks. The quantity of water that is generated from the condensation activities is unknown.

i) The cherries are then placed in stainless steel containers where coloring (typically Red #40, caramel color and "red cabbage" coloring) is added.

j) The cherries are then typically cut in halve, go through a final QA/QC check and packaged for final shipment. The final finishing process generates a "waste juice" which is contained in temporary containers and stored in the western portion of the maintenance building. The "waste juice" is typically disposed of offsite.

3) Each piece of equipment is washed using a non-phosphate detergent after each use. The wastewater is then discharged into the floor drain. The wastewater is then transported via buried piping to a sump located in the western portion of the maintenance building. The plant owner did not know the volume of waste water generated from cleaning activities.

4) The eastern portion of the maintenance building contains an area where trucks and equipment are maintained and equipment to remove pits is constructed. Materials associated with vehicle maintenance are stored here. Floor drains are located in the maintenance areas to catch spills.

5) The central portion of the maintenance building contains three tanks approximately 75,000 gallon each that is currently providing temporary storage for the brine water and waste water generated from plant operations. The central portion of the maintenance building also contains a trash compactor and temporary storage for the cherry pits.

6) The western portion of the maintenance building contains a sump where all of the wastewater captured from the floor drains in the processing plant and maintenance buildings is discharged. The sump is approximately 20 feet wide by 20 feet long by 10 feet deep. It is covered with plywood boards. A conveyor belt is located in the sump to remove cherries and other solids that accumulate and float in the water. The water is then pumped through a screen to remove additional solids. The water was formerly transported to the onsite lagoon. Currently the water is transported to the onsite 75,000 gallon tanks.

7) The western portion of the maintenance building also contains a storage area of the "waste juice" that is generated during the final finishing stages. The waste juice in stored in temporary storage containers measuring approximately 4 feet by 4 feet by 3 feet deep. Approximatley 40 storage containers of waste juice are located in the western portion of the maintenance building.

8) The vats where the cherries and brine are stored were observed. All the vats contained covers except for four vats to the west of processing plant. These four vats were empty. All vats were located as indicated on figure provide by Inland Seas with the exception that the southern most vat located on western row, northeast of the maintain building is no longer present.

9) The lagoon where the waste water and brine was formerly disposed was observed. Several large tarps cover the lagoon and are secured on the edge of the lagoon by soil. The tarp appeared to be bubbled due to what is believed to be methane generation from the lagoon.

10) According to the owner, in November 2005 high winds occurred in the area and "white caps" developed on the lagoon forcing the lagoon contents over the western edge of the lagoon. The lagoon contents caused erosion of the surrounding soils and of the western berm thus allowing the lagoon contents to drain out of the lagoon. The actual volume of water that was released was unknown.

11) The lagoon is reportly lined with a PVC liner and was designed and constructed by Elmer's Construction and Engineering, Inc.

12) During the date of the site walk through excavation activities were taken place south of the lagoon. The excavated soil was used as backfill for the area south of Angel Road.

13) Tarps measuring approximately 50 feet by 50 feet were placed on the ground surface at two locations to the west and southwest of the lagoon. The owner stated that these areas contained ponded water when the lagoon overflowed. The water had since been absorbed in the ground or drained to other areas of the site. The tarps were place there to prevent further water (from snow and rain accumulation) infiltration into the areas.

14) Water from the lagoon flowed to the southwest to a storm water trench located approximately 350 feet north of the maintenance building. The storm water trench contained an approximate 12 inch diameter overflow culvert on the west side of the trench. Once the trench was full, the lagoon water flowed out the overflow culvert into the storm water trench that runs along Munro Street. Water in the onsite storm trench accumulated at a faster rate than what could be discharged at the overflow pipe, thus the storm trench overflowed and drained water east and south of the Maintenance Building.

15) The overflow culvert has since been filled with bentonite chips by Inland Seas.

16) The excavation to the south of Angel Road was observed. Inland Seas was in the process of backfilling the excavation. They were approximately 50% complete with backfilling activities.

Follow-up Question for WRS and Cherry Blossom LLC:

1) Please provide all analytical data from the lagoon. Include sample dates, sample methods, and laboratory methods.

2) Provide a list of all chemicals, materials and coloring agents used in the plant processes. Include the common name, chemical name and quantity stored at the plant.

3) Provide a list of all chemicals and materials used in the maintenance area of the site.

4) Provide a mass balance of water usage and waste water generated

5) Manifests for water removal and soil removal from Area D.

6) Photographic documentation of excavation activities in Area D.

From: McCallister.Amanda@epamail.epa.gov
Sent: Friday, December 16, 2005 10:32 AM
To: Capone, Daniel M.
Subject: 40CFR117.3 list
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TITLE 40--PROTECTION OF ENVIRONMENT

CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

PART 117_DETERMINATION OF REPORTABLE QUANTITIES FOR HAZARDOUS SUBSTANCES --Table of Contents

Subpart A_General Provisions

Sec. 117.3 Determination of reportable quantities.

Each substance in Table 117.3 that is listed in Table 302.4, 40 CFR part 302, is assigned the reportable quantity listed in Table 302.4 for that substance.

Table 117.3--Reportable Quantities of Hazardous Substances Designated Pursuant to Section 311 of the Clean Water Act

Note: The first number under the column headed ``RQ'' is the reportable quantity in pounds. The number in parentheses is the metric equivalent in kilograms. For convenience, the table contains a column headed ``Category'' which lists the code letters ``X'', ``A'', ``B'', ``C'', and ``D'' associated with reportable quantities of 1, 10, 100, 1000, and 5000 pounds, respectively.

Table 117.3--Reportable Quantities of Hazardous Substances Designated Pursuant to Section 311 of the Clean Water Act

Material	Category	RQ in pounds (kilograms)
Acetaldehyde	C	1,000 (454)
Acetic acid	D	5,000 (2,270)
Acetic anhydride	D	5,000 (2,270)
Acetone cyanohydrin	A	10 (4.54)
Acetyl bromide	D	5,000 (2,270)
Acetyl chloride	D	5,000 (2,270)
Acrolein	X	1 (0.454)
Acrylonitrile	B	100 (45.4)
Adipic acid	D	5,000 (2,270)
Aldrin	X	1 (0.454)
Allyl alcohol	B	100 (45.4)
Allyl chloride	C	1,000 (454)
Aluminum sulfate	D	5,000 (2,270)
Ammonia	B	100 (45.4)
Ammonium acetate	D	5,000 (2,270)
Ammonium benzoate	D	5,000 (2,270)
Ammonium bicarbonate	D	5,000 (2,270)
Ammonium bichromate	A	10 (4.54)
Ammonium bifluoride	B	100 (45.4)
Ammonium bisulfite	D	5,000 (2,270)

Ammonium carbamate	D	5,000 (2,270)
Ammonium carbonate	D	5,000 (2,270)

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Ammonium chloride	D	5,000 (2,270)
Ammonium chromate	A	10 (4.54)
Ammonium citrate dibasic	D	5,000 (2,270)
Ammonium fluoborate	D	5,000 (2,270)
Ammonium fluoride	B	100 (45.4)
Ammonium hydroxide	C	1,000 (454)
Ammonium oxalate	D	5,000 (2,270)
Ammonium silicofluoride	C	1,000 (454)
Ammonium sulfamate	D	5,000 (2,270)
Ammonium sulfide	B	100 (45.4)
Ammonium sulfite	D	5,000 (2,270)
Ammonium tartrate	D	5,000 (2,270)
Ammonium thiocyanate	D	5,000 (2,270)
Amyl acetate	D	5,000 (2,270)
Aniline	D	5,000 (2,270)
Antimony pentachloride	C	1,000 (454)
Antimony potassium tartrate	B	100 (45.4)
Antimony tribromide	C	1,000 (454)
Antimony trichloride	C	1,000 (454)
Antimony trifluoride	C	1,000 (454)
Antimony trioxide	C	1,000 (454)
Arsenic disulfide	X	1 (0.454)
Arsenic pentoxide	X	1 (0.454)
Arsenic trichloride	X	1 (0.454)
Arsenic trioxide	X	1 (0.454)
Arsenic trisulfide	X	1 (0.454)
Barium cyanide	A	10 (4.54)
Benzene	A	10 (4.54)
Benzoic acid	D	5,000 (2,270)
Benzonitrile	D	5,000 (2,270)
Benzoyl chloride	C	1,000 (454)
Benzyl chloride	B	100 (45.4)
Beryllium chloride	X	1 (0.454)
Beryllium fluoride	X	1 (0.454)
Beryllium nitrate	X	1 (0.454)
Butyl acetate	D	5,000 (2,270)
Butylamine	C	1,000 (454)
n-Butyl phthalate	A	10 (4.54)
Butyric acid	D	5,000 (2,270)
Cadmium acetate	A	10 (4.54)
Cadmium bromide	A	10 (4.54)
Cadmium chloride	A	10 (4.54)
Calcium arsenate	X	1 (0.454)
Calcium arsenite	X	1 (0.454)
Calcium carbide	A	10 (4.54)
Calcium chromate	A	10 (4.54)
Calcium cyanide	A	10 (4.54)
Calcium dodecylbenzenesulfonate	C	1,000 (454)
Calcium hypochlorite	A	10 (4.54)
Captan	A	10 (4.54)
Carbaryl	B	100 (45.4)
Carbofuran	A	10 (4.54)
Carbon disulfide	B	100 (45.4)
Carbon tetrachloride	A	10 (4.54)

Chlordane	X	1 (0.454)
Chlorine	A	10 (4.54)
Chlorobenzene	B	100 (45.4)
Chloroform	A	10 (4.54)
Chlorosulfonic acid	C	1,000 (454)
Chlorpyrifos	X	1 (0.454)
Chromic acetate	C	1,000 (454)
Chromic acid	A	10 (4.54)
Chromic sulfate	C	1,000 (454)
Chromous chloride	C	1,000 (454)
Cobaltous bromide	C	1,000 (454)
Cobaltous formate	C	1,000 (454)
Cobaltous sulfamate	C	1,000 (454)
Coumaphos	A	10 (4.54)
Cresol	B	100 (45.4)
Crotonaldehyde	B	100 (45.4)
Cupric acetate	B	100 (45.4)

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Cupric acetoarsenite	X	1 (0.454)
Cupric chloride	A	10 (4.54)
Cupric nitrate	B	100 (45.4)
Cupric oxalate	B	100 (45.4)
Cupric sulfate	A	10 (4.54)
Cupric sulfate, ammoniated	B	100 (45.4)
Cupric tartrate	B	100 (45.4)
Cyanogen chloride	A	10 (4.54)
Cyclohexane	C	1,000 (454)
2,4-D Acid	B	100 (45.4)
2,4-D Esters	B	100 (45.4)
DDT	X	1 (0.454)
Diazinon	X	1 (0.454)
Dicamba	C	1,000 (454)
Dichlobenil	B	100 (45.4)
Dichlone	X	1 (0.454)
Dichlorobenzene	B	100 (45.4)
Dichloropropane	C	1,000 (454)
Dichloropropene	B	100 (45.4)
Dichloropropene-Dichloropropane (mixture).	B	100 (45.4)
2,2-Dichloropropionic acid	D	5,000 (2,270)
Dichlorvos	A	10 (4.54)
Dicofol	A	10 (4.54)
Dieldrin	X	1 (0.454)
Diethylamine	B	100 (45.4)
Dimethylamine	C	1,000 (454)
Dinitrobenzene (mixed)	B	100 (45.4)
Dinitrophenol	A	10 (45.4)
Dinitrotoluene	A	10 (4.54)
Diquat	C	1,000 (454)
Disulfoton	X	1 (0.454)
Diuron	B	100 (45.4)
Dodecylbenzenesulfonic acid	C	1,000 (454)
Endosulfan	X	1 (0.454)
Endrin	X	1 (0.454)
Epichlorohydrin	B	100 (45.4)
Ethion	A	10 (4.54)
Ethylbenzene	C	1,000 (454)

Ethylenediamine	D	5,000 (2,270)
Ethylenediamine-tetraacetic acid (EDTA).	D	5,000 (2,270)
Ethylene dibromide	X	1 (0.454)
Ethylene dichloride	B	100 (45.4)
Ferric ammonium citrate	C	1,000 (454)
Ferric ammonium oxalate	C	1,000 (454)
Ferric chloride	C	1,000 (454)
Ferric fluoride	B	100 (45.4)
Ferric nitrate	C	1,000 (454)
Ferric sulfate	C	1,000 (454)
Ferrous ammonium sulfate	C	1,000 (454)
Ferrous chloride	B	100 (45.4)
Ferrous sulfate	C	1,000 (454)
Formaldehyde	B	100 (45.4)
Formic acid	D	5,000 (2,270)
Fumaric acid	D	5,000 (2,270)
Furfural	D	5,000 (2,270)
Guthion	X	1 (0.454)
Heptachlor	X	1 (0.454)
Hexachlorocyclopentadiene	A	10 (4.54)
Hydrochloric acid	D	5,000 (2,270)
Hydrofluoric acid	B	100 (45.4)
Hydrogen cyanide	A	10 (4.54)
Hydrogen sulfide	B	100 (45.4)
Isoprene	B	100 (45.4)
Isopropanolamine dodecylbenzenesulfonate.	C	1,000 (454)
Kepone	X	1 (0.454)
Lead acetate	A	10 (4.54)
Lead arsenate	X	1 (0.454)
Lead chloride	A	10 (4.54)
Lead fluoborate	A	10 (4.54)
Lead fluoride	A	10 (4.54)
Lead iodide	A	10 (4.54)

Lead nitrate	A	10 (4.54)
Lead stearate	A	10 (4.54)
Lead sulfate	A	10 (4.54)
Lead sulfide	A	10 (4.54)
Lead thiocyanate	A	10 (4.54)
Lindane	X	1 (0.454)
Lithium chromate	A	10 (4.54)
Malathion	B	100 (45.4)
Maleic acid	D	5,000 (2,270)
Maleic anhydride	D	5,000 (2,270)
Mercaptodimethur	A	10 (4.54)
Mercuric cyanide	X	1 (0.454)
Mercuric nitrate	A	10 (4.54)
Mercuric sulfate	A	10 (4.54)
Mercuric thiocyanate	A	10 (4.54)
Mercurous nitrate	A	10 (4.54)
Methoxychlor	X	1 (0.454)
Methyl mercaptan	B	100 (45.4)
Methyl methacrylate	C	1,000 (454)
Methyl parathion	B	

Follow-up Question for WRS and Cherry Blossom LLC:

1) Provide all laboratory analytical data from the lagoon. Include sample dates, sample methods, and laboratory methods.

2) Provide a list of all chemicals, materials and coloring agents used in the WRC and Cherry Blossom LLC processes, maintenance area and throughout the site. Include the common name, chemical name and quantity stored at the facility.

3) Provide a mass balance of water usage and wastewater generated during 2004 and 2005.

4) Provide all disposal locations, manifests, weight tickets, load tickets, etc. and quantities for all wastes generated including but not limited to waste water, waste juices, and solid wastes during 2004 and 2005. Include materials disposed both onsite and offsite.

5) Provide all documentation of soil removal from Area D including but not limited to all photographs, manifests and survey data.